CLAIMS

1. A process for forming the stator of a linear electric motor, said stator comprising an annular stack of lamination elements (5) seated laterally to each other, each lamination element (5) having an internal axial extension (11) and two end radial extensions (12), and in which annular stack is mounted a tubular coil (6), characterized in that it comprises the steps of:

a- providing lamination elements (10), each defined by two lamination portions (13, 14) to be affixed to each other to complete the respective lamination element (10), at least one of said lamination portions (13, 14) having at least part of the internal axial extension (11) of the respective lamination element (10);

b- providing a rectilinear alignment of each of a plurality of lamination portions (13, 14) presenting a radially internal axial edge (13c, 14c), said lamination portions (13, 14) being laterally mutually seated, with their respective radially internal axial edges (13c, 14c) defining a flat surface;

c- affixing to each other the radially internal axial edges (13c, 14c) of the lamination portions (13, 14) of he rectilinear alignment of each plurality of lamination portions (13, 14), to allow only the relative limited angular displacement of each lamination portion (13, 14) around its part of the radially internal axial edge (13c, 14c);

d- deforming the alignment of each plurality of lamination portions (13, 14) affixed to each other to an annular shape, with the respective radially internal axial edges (13c, 14c) defining an internal cylindrical surface of the respective annular assembly (20, 30);

e- forming two mutually complementary annular assemblies (20, 30), with the lamination portions (13, 14) of each annular assembly (20, 30) being seated side by side in relation to each other; and

f- seating in the interior of each of said annular assemblies (20, 30) a respective adjacent end portion of the tubular coil (6), affixing the two annular assemblies (20, 30) to each other to complete the shape of the annular stack of lamination elements (5).

2. The process according to claim 1, characterized in that in step "f" the two annular assemblies (20, 30) of lamination elements (10) are affixed to each other in seating regions (15, 16) with mutual fitting.

3. The process according to claim 1, characterized in that the mutual fixation of the lamination portions (13, 14) is obtained with the step of providing an adhesive to the seating region (15, 16) with the mutual fitting of at least one of the annular assemblies (20, 30).

4. The process according to claim 3, characterized in that it comprises the further step of submitting the adhesive to cure under tension, mutually affixing the lamination portions (13, 14) of the two annular assemblies (20, 30).

5. The process according to claim 3, characterized in that, in step "a", one of the lamination portions (13, 14) of each lamination element (10) is provided with a recess (17) in the seating region (15, 16) for the other lamination portion (13, 14), which is provided in the respective seating region (15, 16) with a complementary projection (18) to be fitted in said recess (17) upon the fixation of the two annular assemblies (20, 30).

6. The process according to claim 1, characterized in that step "f" comprises the additional steps of:

- seating a respective end portion of the tubular coil (6) in the interior of one of said annular assemblies (20, 30); and

- mounting the other of said annular assemblies (20, 30) to the remainder of the tubular coil (6), affixing the two annular assemblies (20, 30) to each other, to complete the shape of the annular stack of lamination elements (5).

7. The process according to claim 1, characterized in that it includes a further step of providing the tubular coil (6) with an insulating cover (70).

8. The process according to claim 7, characterized in that the insulating cover (70) is injected around the tubular coil (6).

9. The process according to claim 1, characterized in that the tubular coil (6) is affixed between the annular assemblies (20, 30).

10. The process according to claim 9, characterized in that the tubular coil (6) is affixed by adhesive to the annular assemblies (20, 30).

11. An annular stack of lamination elements of the type for forming the stator of a linear electric motor and comprising a plurality of lamination elements (10) seated laterally to each other, each lamination element (10) having an internal axial extension (11) and two end radial extensions (12), and in which annular stack is mounted a tubular coil (6), characterized in that each lamination element (10) is defined by two lamination portions (13, 14) to be affixed to each other, to complete the respective lamination element (10), at least one of said lamination portions (13, 14) having at least part of the internal axial extension (11) of the respective lamination element and one of the end radial extensions (12).

12. The lamination stack according to claim 8, characterized in that each lamination portion (13, 14) presents a respective seating region (15, 16) for the mutual fitting to the other lamination portion (13, 14) upon the fixation of two annular assemblies (20, 30) to each other.

13. The lamination stack according to claim 9, characterized in that one of the lamination portions (13, 14) of each lamination element (10) presents a recess (17) in the respective seating region (13c, 14c) for the fitting of a complementary projection (18) provided in another lamination portion (13, 14), to complete the respective lamination element (10) upon the fixation of two annular assemblies (20, 30) to each other.

14. A stator for an electric motor of the type comprising a plurality of lamination elements (10) seated laterally to each other, each lamination element (10) having an internal axial extension (11) and two end radial extensions (12), in which stator is mounted a tubular coil (6), characterized in that each lamination element (10) is defined by two lamination portions (13, 14) to be affixed to each other, to complete the respective lamination element (10), at least one of said lamination portions (13, 14) having at least part of the internal axial extension (11) of the respective lamination element (10) and one of the end radial extensions (12), and the tubular coil (6) being provided with an insulating cover (70) injected thereon.